

=> e e3+all

| | | | |
|-----|-------|-----|--|
| E1 | 0 | BT3 | Biopolymer formation factors (non-CA heading)/CT |
| E2 | 1173 | BT2 | RNA formation factors/CT |
| E3 | 67029 | BT1 | Transcription factors/CT |
| E4 | | --> | Transcription factors (L) .sigma./CT |
| E5 | 17 | OLD | Ribonucleic acid formation factor sigma/CT |
| E6 | | OLD | Ribonucleic acid formation factors (L) .sigma./CT |
| E7 | 121 | OLD | Ribonucleic acid formation factors sigma/CT |
| E8 | | UF | .sigma. Factor (transcription factor)/CT |
| E9 | | UF | .sigma. Ribonucleic acid formation factors/CT |
| E10 | | UF | Factor .sigma. (transcription factor)/CT |
| E11 | | UF | Factor sigma (ribonucleic acid formation initiation)/CT |
| E12 | | UF | RNA factors .sigma./CT |
| E13 | | UF | Sigma factors/CT |
| E14 | | UF | Transcription factor .sigma./CT |

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(FILE 'HOME' ENTERED AT 18:11:49 ON 25 JAN 2003)

FILE 'HCAPLUS' ENTERED AT 18:12:07 ON 25 JAN 2003

FILE 'HCAPLUS' ENTERED AT 18:12:29 ON 25 JAN 2003

L1 1618 SEA ABB=ON PLU=ON SIGH OR SIGMA FACTOR H OR SIGMA FACTOR H
OR (TRANSCRIPTION FACTOR (L) SIGMA)
L2 5 SEA ABB=ON PLU=ON L1 (L) (CORYNEBACTERIA OR CORYNEBACTERIA
GLUTAMICUM OR (BACTERIA (L) CORYNEFORM))
L3 2 SEA ABB=ON PLU=ON L2 (L) (DNA OR CDNA OR NUCLEIC ACID OR
POLYNUCLEOTIDE)
D L2 IBIB AB 1-5

=> d 12 ibib ab 1-5

L2 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:182014 HCAPLUS

DOCUMENT NUMBER: 136:244347

TITLE: Novel Corynebacterium sigD genes used to improve the fermentative prodn. of L-amino acids

INVENTOR(S): Bathe, Brigitte; Kreutzer, Caroline; Martens, Monika; Farwick, Mike; Herrmann, Thomas; Pfefferle, Walter

PATENT ASSIGNEE(S): Degussa A.-G., Germany

SOURCE: Ger. Offen., 8 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|------------------|----------|
| DE 10043331 | A1 | 20020314 | DE 2000-10043331 | 20000902 |
| EP 1205553 | A1 | 20020515 | EP 2001-117264 | 20010717 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| US 2002111468 | A1 | 20020815 | US 2001-941945 | 20010830 |

PRIORITY APPLN. INFO.: DE 2000-10043331 A 20000902

AB The invention concerns the isolation and sequencing of **coryneform bacteria** polynucleotide sequences, that can be used to improve the fermentative prodn. of L-amino acids. Gene sigD codes for an activator of **transcription factor .sigma.D**. The polynucleotide sequences are selected from the following groups: (a) polynucleotide, which is at least 70% identical to the polynucleotide sequence that encodes the Corynebacterium glutamicum sigD gene protein (SEQ.2); (b) polynucleotide sequence that encodes a protein that is at least 70% identical to the sigD protein (SEQ. 2); (c) polynucleotide, that is complementary to the polynucleotide sequence of (a) or (b); and (d) the polynucleotide sequence that contg. at least 15 adjacent nucleotides of the polynucleotide sequence of (a), (b) or (c).

L2 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:172101 HCAPLUS

DOCUMENT NUMBER: 136:215517

TITLE: Sequence of sigM gene from corynebacteria and use thereof in synthesis of L-lysine

INVENTOR(S): Bathe, Brigitte; Bastuck, Christine; Farwick, Mike; Hermann, Thomas; Pfefferle, Walter

PATENT ASSIGNEE(S): Degussa Ag, Germany

SOURCE: PCT Int. Appl., 42 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|------------------|----------|
| WO 2002018599 | A1 | 20020307 | WO 2001-EP9972 | 20010830 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| DE 10136984 | A1 | 20020418 | DE 2001-10136984 | 20010728 |
| AU 2001089850 | A5 | 20020313 | AU 2001-89850 | 20010830 |
| US 2002106755 | A1 | 20020808 | US 2001-942935 | 20010831 |

PRIORITY APPLN. INFO.: DE 2000-10043337 A 20000902

AB The **sigM** gene of *Corynebacterium glutamicum* ATCC13032 encoding a sigma factor M is cloned for use in increasing the efficiency of ferment. of L-lysine by coryneform bacteria. The expression vector contg. **sigM** gene is constructed. Methods and culture media for fermentative prepn. of L-lysine with recombinant bacterial strains transformed with these vectors are also provided. Enhancement of the **sigM** gene expression by **sigM** shuttle vector increased the yield of lysine in a *Corynebacterium* host from 14.43 g lysine/L at 11.8 OD660 to 14.82 g lysine/L at 9.0 OD660. The fermentatively prepd. L-lysine are useful in pharmaceutical industry and foodstuff industry and very particularly in animal nutrition.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:172100 HCAPLUS

DOCUMENT NUMBER: 136:231337

TITLE: Sequence of **sigH** gene from **corynebacteria** and use thereof in synthesis of L-lysine

INVENTOR(S): Bathe, Brigitte; Schroeder, Indra; Rieping, Mechthild; Marx, Achim; Farwick, Mike; Pfefferle, Walter; Hermann, Thomas

PATENT ASSIGNEE(S): Degussa A.-G., Germany

SOURCE: PCT Int. Appl., 45 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|----------|--------------------|----------|
| WO 2002018598 | A1 | 20020307 | WO 2001-EP9250 | 20010810 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| DE 10133427 | A1 | 20020314 | DE 2001-10133427 | 20010710 |
| AU 2001082084 | A5 | 20020313 | AU 2001-82084 | 20010810 |
| US 2002106756 | A1 | 20020808 | US 2001-942936 | 20010831 |
| PRIORITY APPLN. INFO.: | | | DE 2000-10043333 A | 20000902 |
| | | | DE 2001-10133427 A | 20010710 |
| | | | WO 2001-EP9250 W | 20010810 |

AB The **sigH** gene of *Corynebacterium glutamicum* ATCC13032 encoding a sigma factor H is cloned for use in increasing the efficiency of ferment. of L-lysine by **coryneform bacteria**. The expression vector contg. **sigH** gene is constructed. Methods and culture media for fermentative prepn. of L-lysine with recombinant bacterial strains transformed with these vectors are also provided. Enhancement of the **sigH** gene expression by **sigH** shuttle vector increased the yield of lysine in a *Corynebacterium* host from 13.6 g lysine/L at 6.9 OD660 to 14.25 g lysine/L at 10.0 OD660. The fermentatively prepd. L-lysine are useful in pharmaceutical industry and foodstuff industry and very particularly in animal nutrition.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:172091 HCAPLUS

DOCUMENT NUMBER: 136:231335

TITLE: Sequence of **sigC** gene from **corynebacteria** and use

INVENTOR(S): thereof in synthesis of L-lysine
Bathe, Brigitte; Hans, Stephan; Farwick, Mike;
Hermann, Thomas; Pfefferle, Walter
PATENT ASSIGNEE(S): Degussa Ag, Germany
SOURCE: PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|--------------------|----------|
| WO 2002018589 | A2 | 20020307 | WO 2001-EP9163 | 20010808 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| DE 10133426 | A1 | 20020314 | DE 2001-10133426 | 20010710 |
| AU 2001093740 | A5 | 20020313 | AU 2001-93740 | 20010808 |
| US 2002146782 | A1 | 20021010 | US 2001-941936 | 20010830 |
| PRIORITY APPLN. INFO.: | | | DE 2000-10043332 A | 20000902 |
| | | | DE 2001-10133426 A | 20010710 |
| | | | WO 2001-EP9163 W | 20010808 |

AB The sigC gene of Corynebacterium glutamicum ATCC13032 encoding a sigma factor C is cloned for use in increasing the efficiency of fermn. of L-lysine by coryneform bacteria. The expression vector contg. sigC gene is constructed. Methods and culture media for fermentative prepn. of L-lysine with recombinant bacterial strains transformed with these vectors are also provided. Enhancement of the sigC gene expression by sigC shuttle vector increased the yield of lysine in a Corynebacterium host from 12.99 g lysine/L at 11.18 OD660 to 13.96 g lysine/L at 12.8 OD660. The fermentatively prepd. L-lysine are useful in pharmaceutical industry and foodstuff industry and very particularly in animal nutrition.

L2 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:171940 HCAPLUS
DOCUMENT NUMBER: 136:231331
TITLE: Sequence of sigE gene from corynebacteria and use thereof in synthesis of L-lysine
INVENTOR(S): Moeckel, Bettina; Hermann, Thomas; Farwick, Mike; Binder, Michael; Pfefferle, Walter
PATENT ASSIGNEE(S): Degussa Ag, Germany
SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|------------------|----------|
| WO 2002018428 | A2 | 20020307 | WO 2001-EP8146 | 20010714 |
| WO 2002018428 | A3 | 20020606 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| DE 10126422 | A1 | 20020314 | DE 2001-10126422 | 20010531 |

| | | | | |
|------------------------|----|----------|--------------------|----------|
| AU 2001085843 | A5 | 20020313 | AU 2001-85843 | 20010714 |
| US 2002103356 | A1 | 20020801 | US 2001-935757 | 20010824 |
| PRIORITY APPLN. INFO.: | | | DE 2000-10043336 A | 20000902 |
| | | | DE 2001-10126422 A | 20010531 |
| | | | US 2001-295009P P | 20010604 |
| | | | WO 2001-EP8146 W | 20010714 |

AB The sigE gene of *Corynebacterium glutamicum* ATCC13032 encoding a sigma factor E is cloned for use in increasing the efficiency of fermn. of L-lysine by coryneform bacteria. The expression vector contg. sigE gene is constructed. Methods and culture media for fermentative prepn. of L-lysine with recombinant bacterial strains transformed with these vectors are also provided. Enhancement of the sigE gene expression by sigE shuttle vector increased the yield of lysine in a *Corynebacterium* host from 13.14 g lysine/L at 12.2 OD660 to 14.09 g lysine/L at 13.07 OD660. The fermentatively prepd. L-lysine are useful in pharmaceutical industry and foodstuff industry and very particularly in animal nutrition.